

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF VIRGINIA
CHARLOTTESVILLE DIVISION**

CHRISTOPHER SEAMAN and
ELIZABETH ALLISON LYONS,
individually and on behalf of C.S., a
minor, *et al.*,

Plaintiffs,

v.

Civil Action No. 3:22-cv-00006-NKM

THE COMMONWEALTH OF
VIRGINIA; *et al.*,

Defendants.

**AFFIDAVIT OF COLIN GREENE, MD
ACTING STATE HEALTH COMMISSIONER
FOR THE COMMONWEALTH OF VIRGINIA**

I, Dr. Colin M. Greene, declare under penalty of perjury that the following is true and correct, to the best of my knowledge and belief.

1. I currently serve as Acting State Health Commissioner for the Commonwealth of Virginia. I have been in that role since 15 January 2022. Before my appointment as Acting State Health Commissioner, I served as Health Director of the Lord Fairfax Health District. Prior to 2017, I served 30 years on active duty in the US Army, with assignments including Interim Commander of the Walter Reed Army Institute of Research in Silver Spring, Maryland, and numerous clinical, administrative, academic, and public health-related assignments, including deputy commander of the 28th Combat Support Hospital in Iraq. I am a board-certified family physician with 35 years' experience and hold a Master of Public Health from the University of Washington.

2. In my capacity as Acting State Health Commissioner, I advise the Governor, the Virginia Department of Health, and the Virginia Department of Education on the Commonwealth's effort to combat the novel coronavirus known as COVID-19.

3. On January 30, 2020, the World Health Organization declared the outbreak a "public health emergency of international concern." On January 31, United States Health and Human Services Secretary declared a public health emergency. On February 7, the prior State Health Commissioner declared COVID-19 a Communicable Disease of Public Health Threat for Virginia. On March 12, Governor Northam declared a State of Emergency in the Commonwealth in response to the spread of COVID-19.

4. In 2020, there was no proven treatment or cure for COVID-19 and no vaccine to address COVID-19. As a result, the Governor and the prior Commissioner of Health issued several orders to mitigate the spread of COVID-19 in the Commonwealth.

- On March 13, 2020, the Governor temporarily closed K–12 schools and limited the number of patrons in restaurants, fitness centers, and theaters to no more than 10 per establishment.¹
- On March 20, the Governor issued Order of Public Health Emergency 1, which amended the Declaration of Public Health Emergency previously

¹ Exhibit 1 (Office of the Governor, *Governor Northam Orders All Virginia K–12 Schools Closed for Minimum of Two Weeks* (Mar. 13, 2020)); Exhibit 3 (Office of the Governor, *Executive Order 53: Temporary Restrictions on Restaurants, Recreational, Entertainment, Gatherings, Non-Essential Retail Business, and Closure of K-12 Schools Due to Novel Coronavirus (COVID-19)* (Mar. 23, 2020)).

issued and made clear that willful violation of the 10-patron limit on restaurants, fitness centers, and gymnasiums was punishable as a Class-1 misdemeanor and/or license suspension and was enforceable by the Health Commissioner in a civil action.²

- On March 24, 2020, the Governor issued Executive Order 53, which extended school closures for the remainder of the school year, temporarily prohibited private and public gatherings of 10 or more individuals, and directed certain businesses (such as entertainment venues) to close their doors to the public. Other businesses (for example, restaurants) were required to close all dining and congregation areas but were permitted to engage in takeout and delivery services. Most retail businesses were also required to adhere to the 10-person limit. Certain essential businesses (such as grocery stores) were permitted to exceed the 10-person limit, but were required to adhere to social distancing recommendations, enhanced sanitizing practices on common surfaces, and other appropriate workplace guidance from state and federal authorities while in operation.³
- On March 31, 2020, the Governor issued Executive Order 55, which imposed additional restrictions and extended the duration of the gatherings

² Exhibit 2 (Commonwealth of Virginia Executive Department, *Order of the Governor and State Health Commissioner: Declaration of Public Health Emergency* (Mar. 16, 2020)).

³ Exhibit 3, *supra* note 1, at 2.

restriction announced in Executive Order 53. Executive Order 55 directed all Virginians to stay at home except as needed to perform essential tasks.⁴

5. Much has changed since 2020, but many health authorities have not updated their guidance accordingly. Safe and effective vaccines are now widely available for COVID-19, even for children as young as five years old.⁵ In one clinical study, COVID-19 vaccines were over 90% effective in preventing COVID-19 in the 5 through 15 age group, as well as in preventing severe illness with COVID-19 in children 16 and older.⁶ Medical providers have identified numerous effective treatments for COVID-19.⁷ How COVID-19 spreads and therefore effective mitigation efforts are better understood. The CDC has issued guidance on numerous COVID-19 mitigation strategies, including screening testing, ventilation, handwashing, and respiratory etiquette, staying home when sick and getting tested, contact tracing in combination with quarantine and isolation, and cleaning and disinfection.⁸

6. Several variants of the COVID-19 virus have emerged, each with varying levels of contagion and virulence. The most recent variant, Omicron, has in many ways behaved quite differently from previous variants. It spread extremely

⁴ Exhibit 4 (Office of the Governor, *Executive Order 55: Temporary Stay at Home Order Due to Novel Coronavirus (COVID-19)* (Mar. 30, 2020)).

⁵ Exhibit 40 (Centers for Disease Control and Prevention, *COVID-19 Vaccines for Children and Teens* (Jan. 11, 2022)).

⁶ Exhibit 41 (Mayo Clinic, *COVID-19 vaccines for kids: What you need to know* (Jan. 9, 2022)).

⁷ Exhibit 42 (National Institutes of Health, *COVID-19 Treatments* (Jan. 31, 2022)); Exhibit 43 (Harvard Medical School, *Treatments for COVID-19* (Feb. 15, 2022)).

⁸ Exhibit 51 (Centers for Disease Control and Prevention, *Guidance for COVID-19 Prevention in K–12 Schools* (Jan. 13, 2022)).

rapidly in numerous foreign countries and states, and followed a relatively consistent pattern of a rapid rise, peak, and fall of cases.⁹ In Virginia, Omicron's impact coincided with an up to 20-fold increase in average daily case counts between November 1, 2021 and Jan 11, 2022, with the highest rates of increase, and highest case rates per capita, in the urban and suburban regions, with somewhat lower rates of rise in rural areas.¹⁰ This pattern was striking insofar as the urban and suburban regions in Virginia typically have relatively higher vaccination rates than rural areas,¹¹ as well as greater adherence to mitigation techniques, including masking. Consistent with the pattern seen elsewhere, infection rates in Virginia are now dropping precipitously.¹² As of February 21, 2022, the seven-day average of daily COVID-19 case rates had dropped by 86.4% from its peak on January 13, 2022.¹³

7. Despite the rapid and typically record case rates occurring during the Omicron phase, death rate rises have been proportionately much lower when compared with previous variants. These outcomes are consistent with literature describing Omicron as a highly contagious variant that tends to cause less severe disease.¹⁴ These findings together may be taken to suggest that (1) previously

⁹ Exhibit 5 (Worldometer, *COVID-19 Coronavirus Pandemic* (last updated Feb. 22, 2022) (showing global case count trends)).

¹⁰ Exhibit 6 (Virginia Dep't of Health, *COVID-19 in Virginia: Locality* (last accessed Feb. 18, 2022)).

¹¹ Exhibit 7 (Virginia Dep't of Health, *COVID-19 in Virginia: Vaccine Summary* (last accessed Feb. 18, 2022)).

¹² Exhibit 53 (Worldometer, *Virginia* (last updated Feb. 22, 2022)).

¹³ *Ibid.*

¹⁴ Exhibit 8 (Cecilia Ulloa, et al., *Early estimates of SARS-CoV-2 Omicron variant severity based on a matched cohort study, Ontario, Canada 1* (Jan. 2, 2022)).

applicable mitigation strategies, including universal masking, may be less effective against Omicron than against previous variants, and (2) that the risk of severe disease from Omicron is significantly lower than from Delta and its predecessors. It is apparent that the Omicron variant behaves differently from previous variants of COVID-19, and that assumptions tied to those prior variants, including the benefits of universal masking, may need to be reexamined.

8. Children are at very low risk of severe illness due to COVID-19. In Virginia, there have been recorded 18,338 deaths associated with the disease. Of those, eight were in children aged 0–9, and ten in persons aged 10–19, so persons under age 20 accounted for 0.1% of total COVID deaths.¹⁵ Viewed another way, there are 2,103,000 persons in Virginia under age 20,¹⁶ yielding a 2-year risk of death from COVID-19 for that age group of 0.00086%, or about 1/117,000. These figures include the approximately 18-month period where there was no vaccine available for children. It is apparent that the risk of death from COVID-19 in children, while not zero, is extremely low. For comparison, 11 children aged 0–17 died from influenza in Virginia during the 2018-20 flu seasons.¹⁷ The CDC has found that COVID-19-associated hospitalization rates among children have been similar to flu-associated

¹⁵ Exhibit 9 (Virginia Dep't of Health, *COVID-19 in Virginia: Demographics* (last accessed Feb. 22, 2022)).

¹⁶ Exhibit 10 (United States Census, *Virginia: Populations and People* (last accessed Feb. 22, 2022)).

¹⁷ Exhibit 15 (VAFLU, *Virginia Dep't of Health Weekly Influenza Activity Report 6* (Oct. 7, 2021)).

hospitalization rates during the three recent flu seasons prior to the COVID-19 pandemic.¹⁸

9. The risk of serious illness and death from COVID-19 is higher in children with certain serious underlying medical conditions. The risk of other common respiratory illnesses, including influenza, is also higher for this population.¹⁹

10. K–12 mask mandates impose strict mitigation measures of questionable effectiveness on the portion of the population that bears the lowest risk from COVID-19.

11. It is true that the virus that causes COVID-19 is extremely contagious. It spreads through close person-to-person contact or by contact with the respiratory droplets produced when an infected person coughs, sneezes or talks. As a result, the CDC has said that universal and correct masking helps mitigate the spread of COVID-19. As discussed above, however, it is not clear that these measures are effective against the more easily transmissible, but less severe, Omicron variant.

12. There are benefits and costs to mask wearing in the school environment. The benefits may include reduced transmission of the virus. However, masks made of plain cloth, masks that are soiled or poorly fitting, and masks that are not worn properly provide reduced or no benefit. These types of masks are often observed in the school environment. And multiple studies have recognized that transmission

¹⁸ Exhibit 11 (Centers for Disease Control and Prevention, *Frequently Asked Influenza (Flu) Questions: 2021–2022* 9 (Feb. 14, 2022)).

¹⁹ Exhibit 45 (Centers for Disease Control and Prevention, *Flu & Young Children* 4–5 (Oct. 25, 2021)).

rates within schools are either lower than, or the same as, overall community transmission rates, when prevention strategies are in place.²⁰

13. The CDC presently recommends the use of N95 or KN95 masks as the best practice to reduce COVID transmission. Mandating student use of such masks in schools would have significant downsides because such masks are very tight and uncomfortable and may be poorly tolerated by many children. Most children and most adults are not using N95 or KN95 masks. At the same time, for children capable of wearing N95 or KN95 masks, such masks can reduce the wearer’s risk of contracting COVID-19 by up to 83%.²¹ Properly fitted N95 or KN95 masks provide protection to the wearer from contracting COVID-19²²—even when the wearer is in close proximity to others who are not masked—because these respirators effectively filter out viruses like COVID-19.

²⁰ Exhibit 26 (Justin Lessler, et al., *Household COVID-19 risk and in-person schooling* 1 (June 4, 2021)); Exhibit 33 (Centers for Disease Control and Prevention, *Science Brief: Transmission of SARS-CoV-2 in K–12 Schools and Early Care and Education Programs - Updated* 3 (Dec. 17, 2021)); Exhibit 49 (Va. Dep’t of Health, *Acting State Health Commissioner Order Rescinding Order of Public Health Emergency Ten (2021) Imposing Statewide Requirement to Wear Masks in K–12 Schools* (Jan. 21, 2022)); Exhibit 50 (Va. Dep’t of Health, *Interim Guidance for COVID-19 in Virginia PreK–12 Schools* (Feb. 11, 2022)).

²¹ Exhibit 12 (Kristin L. Andrejko, et al., *Effectiveness of Face Mask or Respirator Use in Indoor Public Settings for Prevention of SARS-CoV-2 Infection* 1 (Feb. 11, 2022)); Exhibit 13 (U.S. Food & Drug Administration, *N95 Respirators, Surgical Masks, Face Masks, and Barrier Face Coverings* 5 (Sept. 15, 2021)); Exhibit 24 (World Health Organization, *Coronavirus disease (COVID-19): Children and masks – Should children who have health issues or a medical condition that compromises their immune system wear a mask?* (Aug. 21, 2020) (recommending children with “underlying health conditions” wear “medical mask[s]”).

²² Exhibit 12, *supra* note 21, at 8.

14. Masks of any kind may cause discomfort, skin irritation, anxiety, and otherwise negatively affect a child's emotional state.²³ Children may have difficulty hearing, talking, perceiving emotion, or otherwise communicating, and making social connections when wearing masks, and mask-wearing can be detrimental to speech and language development.²⁴ Reusing masks can also lead to fungal contamination.²⁵

15. Wearing a mask can be particularly detrimental to children with certain disabilities or health conditions.²⁶ For example, children with asthma or other respiratory impairments may have trouble breathing in masks.²⁷ Masks may also exacerbate anxiety or claustrophobia in children, sometimes leading to respiratory distress or hyperventilation.²⁸ Children with glasses may have trouble seeing as

²³ Exhibit 38 (Priska Ammann, et al., *Perceptions towards mask use in school children during the SARS-CoV-2 pandemic: the Ciao Corona Study* 2–3 (Sept. 8, 2021)).

²⁴ Exhibit 14 (Sean C.L. Deoni, et al., *Impact of the COVID-19 Pandemic on Early Child Cognitive Development: Initial Findings in a Longitudinal Observational Study of Child Health* 2 (Aug. 11, 2021)); Exhibit 27 (UK Dep't for Education, *Evidence Summary: Coronavirus (COVID-19) and the use of face coverings in educational settings* 8–10 (Jan. 2022)); Exhibit 28 (Anna Sfakianaki, et al., *Effect of face mask and noise on word recognition by children and adults* 1 (October 2021)); Exhibit 29 (Marco Marini, et al., *The impact of facemasks on emotion recognition, trust attribution and re-identification* 1 (2021)); Exhibit 30 (Farid Pazhoohi, et al., *Facial masks affect emotion recognition in the general population and individuals with autistic traits* 1 (Sept. 30, 2021)); Exhibit 31 (David J. Lewkowicz, *Masks Can Be Detrimental to Babies' Speech and Language Development*, *Scientific American* 2–3 (Feb. 11, 2021)); Exhibit 32 (Felix Grundmann, et al., *Face masks reduce emotion-recognition accuracy and perceived closeness* 1 (Apr. 23, 2021)); Exhibit 34 (Elizabeth Ritter, et al., *Impact of Masks on Speech Recognition in Adult Patients with and without Hearing Loss* 2 (Sept. 28, 2021)).

²⁵ Exhibit 39 (Vishakh C. Keri, et al., *Pilot study on burden of fungal contamination in face masks: Need for better mask hygiene in the COVID-19 era*, 2021(4) *Le Infezioni in Medicina* 557, 558–59 (Nov. 20, 2021)).

²⁶ Exhibit 25 (World Health Organization, *Coronavirus disease (COVID-19): Children and masks – Should children with developmental disabilities wear masks?* (Aug. 21, 2020)).

²⁷ Exhibit 35 (Andrew C. Engler, *Wearing a Mask if you have Asthma*, *The Allergy & Asthma Clinic* (Aug. 2020)).

²⁸ Exhibit 23 (Israel Amirav & Moran Lavie, *Spurious Asthma Presentation During COVID-19* 2 (Dec. 23, 2021)).

masks fog their glasses.²⁹ Children who are autistic may have sensory sensitivities that make it extremely difficult for them to tolerate mask-wearing.³⁰ Children with speech or hearing impairments may have particular difficulties communicating while wearing masks.³¹

16. As noted above, during the Omicron outbreak, urban regions in Virginia with more restrictive masking policies and practices have experienced transmission rates similar to, or greater than, the transmission rates of rural regions with less restrictive mask policies and practices.

17. There is presently disagreement among health experts regarding the costs and benefits of mask-wearing for children in school. At least one study found that masking teachers and staff was associated with a statistically significant decrease in COVID-19 transmission, however it failed to find the same difference for masking students.³² Some countries such as the United Kingdom, are moving away

²⁹ Exhibit 47 (American Association for Pediatric Ophthalmology and Strabismus, *Tips for Wearing Glasses with Masks* 1 (last accessed, Feb. 19, 2022)).

³⁰ Exhibit 16 (Robyn Thom & Karen Turner, *Helping people with autism spectrum disorder manage masks and COVID-19 tests*, Harvard Medical School (June 10, 2020)); Exhibit 17 (Organization for Autism Research, *The Challenge of Face Masks* 3 (Nov. 12, 2020)).

³¹ Exhibit 46 (Haley Herfurth, *Learn how masking negatively affects those with hearing loss – and how you can help*, UAB News (Aug. 14, 2020)); Exhibit 44 (Nat'l Ass'n of Colleges and Employers, *Addressing Challenges Students With Hearing Loss May Face During Pandemic* (Jul. 4, 2020)); Exhibit 52 (Manoel Nobrega, et al., *Letter to the Editor: How face masks can affect school performance*, 138 Int'l J. of Pediatric Otorhinolaryngology 110328 (Sept. 1, 2020)).

³² Exhibit 54 (Jenna Gettings, et al., *Mask Use and Ventilation Improvements to Reduce COVID-19 Incidence in Elementary Schools — Georgia, November 16–December 11, 2020*, Centers for Disease Control and Prevention 3 (May 28, 2021)).

from mask mandates for children and adults.³³ International bodies including the United Nations Children Fund (UNICEF) and the World Health Organization (WHO) recommend against masking children younger than five, and recommend that decisions to use masks for children ages 6–11 should be based on a multi-factor analysis, including the child’s ability to wear a mask safely and appropriately, and the potential effects of wearing a mask on the child’s learning and psychosocial development.³⁴ Multiple states in this country have recently announced their intention to withdraw mask mandates generally and in schools.³⁵

18. Notwithstanding the above, there are certain circumstances where VDH recommends masking. First, when a child is at increased risk of severe illness from COVID-19 or lives with individuals at higher risk for severe illness, parents should discuss with their medical providers whether to mask. Second, when a child is returning from isolation due to COVID or was subject to a close contact exposure, VDH guidelines permit return to school but recommend that such children wear a mask on days 6–10 following exposure. This approach uses masking on a more

³³ Exhibit 18 (Marie Jackson & Mary O’Connor, *Covid: Face mask rules and Covid passes to end in England*, BBC (Jan. 19, 2022)).

³⁴ Exhibit 22 (World Health Organization, *Coronavirus disease (COVID-19): Children and masks – Should children wear a mask?* (Aug. 21, 2020)); Exhibit 37 (UNICEF, *COVID-19 and masks: Tips for families* (Sept. 1, 2021)).

³⁵ Exhibit 19 (State of New Jersey Dep’t of Health, *Governor Murphy Announces That Universal School Mask Mandate Will Be Lifted Effective March 7* (Feb. 7, 2022)); Exhibit 20 (The Office of Governor Ned Lamont, *Governor Lamont Announces Plan To Eliminate Statewide School Mask Requirement, Allow These Decisions To Be Determined at the Local Level* (Feb. 7, 2022) (Connecticut)); Exhibit 21 (Delaware News, *Governor Carney Announces Expiration of Universal Indoor Mask Mandate on February 11* (Feb. 7, 2022)).

targeted basis, rather than requiring all students to mask all the time regardless of the circumstances.

19. It should be noted that even under strict masking requirements, children typically do not wear masks in school while eating meals, playing sports, and engaging in other activities where masking is not feasible. They do not wear goggles or face shields to protect their eyes from virus particles. And, of course, children are not required to wear masks outside of school or at home. Additionally, most parents and other adults are not required to mask while engaging in their daily activities and are thus not masking consistently. For these reasons too, strict masking in school imposes hardship while providing only questionable benefit toward reducing the transmission of COVID-19.³⁶


20. As to the risk to teachers, they can protect themselves through vaccination, proper masking with respirators, good hygiene, such as frequent hand washing, requiring that sick children stay home, and targeted masking requirements for children discussed above. This is true for COVID-19, the flu, or any contagious respiratory disease.

21. It is apparent that, as described above, the Omicron variant appears more contagious and less likely to cause severe disease, than previous variants of COVID-19. It spread extremely rapidly through urban populations in Virginia where

³⁶ Exhibit 27, *supra* note 24, at 9; Exhibit 36 (Emily Oster, et al., *COVID-19 Mitigation Practices and COVID-19 Rates in Schools: Report on Data from Florida, New York and Massachusetts* (May 21, 2021) (concluding that “[w]e do not find any correlations with mask mandates”); Exhibit 26, *supra* note 20, at 8; Exhibit 48 (Margery Smelkinson, et al., *The Case Against Masks at School*, *The Atlantic* (Jan. 26, 2022)); Exhibit 54, *supra* note 32, at 10.

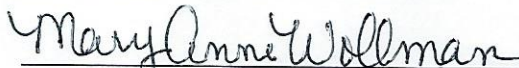
strict mitigation such as masking is more prevalent. Moreover, data suggest that universal masking mandates are not associated with statistically significant reductions in the transmission of the virus in schools. These observations suggest that it is time to re-evaluate previously held assumptions about universal masking.

I, Dr. Colin Greene, hereby certify that the foregoing information is true and accurate to the best of my knowledge and belief.


Colin M. Greene, MD, MPH.
Acting State Health Commissioner

COMMONWEALTH OF VIRGINIA
COUNTY/CITY OF Richmond, to-wit:

Subscribed and sworn to before me this 23rd day of February, 2022.
My commission expires: 2-28-2026


Notary Public / Deputy Clerk
Notary Registration Number:
7372482

